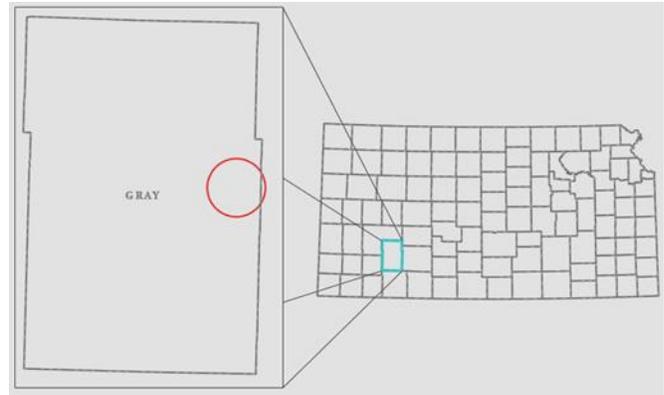


January 2022 – December 2026

# Powerline Dairy, LLC

Water Conservation Area Management Plan



## Water Conservation Area Executive Summary

**WCA Acres:** 2,893 acres

**Number of STK Use Water Rights:** 4

**Number of STK Use Wells:** 4

**Number of IRR Use Water Rights:** 15

**Number of IRR Use Wells:** 20

**Historical Period :** 2012-2016 based on current operations and ownership

### **Prior Conservation:**

- Enrolled in a WCA since January 2017.
- A total of 1060.61 acre-feet (AF) was unused & conserved during WCA
- Irrigation fields (~300 acres) converted to grassland (CRP).
- Over 400 AF per year of effluent applied to crops to supplement groundwater use.

### **WCA Allocation:**

- Total 5 year allocation = 22,794 AF
  - STK Use- Held to 5,544.50 AF
  - IRR Use- Held to 10% conservation 19,577.30 AF

### **Corrective Controls:**

- STK Use File No. 12,932 shall be limited to an annual allocation of 400.00 AF.
- STK Use File No. 25,265 shall be limited to an annual allocation of 400.00 AF.
- Existing stockwater use wells cannot exceed a total annual authorized aggregate use of 719.65 AF (total authorized annual quantity of stockwater use wells).
- Irrigation use wells may divert up to 130% of their authorized annual quantity in a calendar year but each well limited to 5 times authorized annual quantity.
- Irrigation use wells cannot exceed a total annual authorized aggregate of 5,470 AF (total authorized annual quantity of irrigation use wells)

\*Additional corrective controls on Powerline Dairy, LLC WCA Management Plan starting on page 6.

**Conservation Goal (based on 10% of historical use): 2175.25 AF**

NOTE: Executive Summary provided by KS Dept of Agriculture – Division of Water Resources

# WATER CONSERVATION AREA PLAN

Powerline Dairy, LLC  
Gray County, Kansas

**DEC 22 2021**

Received

Garden City Field Office  
Division of Water Resources

**MAR 18 2022**

Received

Garden City Field Office  
Division of Water Resources

1700 E. IRON AVE. ▪ SALINA, KS 67401  
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1303 YUCCA ST. ▪ SCOTT CITY, KS 67871  
WWW.KLAENVIRO.COM

# **POWERLINE DAIRY, LLC WATER CONSERVATION AREA MANAGEMENT PLAN**

## **Management Plan for the Designation of a Water Conservation Area (WCA) for Powerline Dairy, LLC Gray County, Kansas**

### **Purpose**

The social and economic vitality of Powerline Dairy, LLC, its employees, and the local community is dependent upon our water supply. In order to reduce the rate of decline of groundwater levels in our region and extend the life of our water supply, we propose to re-establish a Water Conservation Area that encompasses the land and water rights associated with Powerline Dairy, LLC. The management plan for this Water Conservation Area is presented herein and shall form the basis of a Consent Agreement and Order Designating a Water Conservation Area pursuant to K.S.A. 82a-745 (WCA Law). The participating water right owners agree to the terms and conditions contained in this proposed management plan.

### **Expression of Conservation Goals**

The water right owners participating in the Powerline Dairy, LLC Water Conservation Area have joined together because of their collective desire to sustain their business and community by conserving their groundwater resources. The dairy is currently permitted for a capacity of 12,000 lactating cows. Expansion of the facility is planned during the term of this Water Conservation Area to add 2,000 dry cows and 10,000 heifers. Flexibility is needed to allocate water resources among the variable demands of livestock consumption, dairy processing, and irrigated feed production that rely on groundwater and wastewater. The participants have concluded that the goals of conservation and flexible water resource allocation can be achieved by taking the following actions:

1. Maintain the established reduction in water use that was included in the existing WCA management plan for 2017-2021. The previous management plan implemented a significant reduction (10%) in water use based upon the period of historical use from 2012 through 2016.
2. Maintain flexibility in beneficial use, place of use, and quantity of annual use so that we can:
  - a. Improve management of our water resources while adjusting to weather and market conditions,
  - b. More effectively manage our wastewater and the associated nutrient content to optimize crop production and comply with the requirements of our Kansas and Federal environmental permits, and
  - c. Implement advancements in technology that are compatible with the provisions of this management plan.
3. Participate for a period that is compatible with typical crop rotations and long enough to indicate measurable results.
4. Establish a process to evaluate the effectiveness of this management plan so that it may be revised as needed and continued for subsequent terms.

# **POWERLINE DAIRY, LLC WATER CONSERVATION AREA MANAGEMENT PLAN**

## **Term**

The terms and conditions of the Powerline Dairy, LLC Water Conservation Area shall be effective upon issuance of a Consent Agreement and Order Designating a Water Conservation Area (WCA Agreement) that is approved by all participating water right owners and the Chief Engineer of the Division of Water Resources. The proposed term of the WCA Agreement is five (5) years extending from January 1, 2022, through December 31, 2026.

## **Water Rights Enrolled and Geographical Boundaries**

The Powerline Dairy, LLC Water Conservation Area encompasses the dairy facility located in Section 27 Township 26 South Range 27 West (T26S R27W) and 23 irrigated fields in T26S R27W, all in Gray County. There are 24 points of diversion (wells) associated with 19 water rights in this area. Four water rights are devoted to stockwatering use to supply the dairy and the remainder are authorized for irrigation use to produce feed for the dairy operation. The geographic boundaries of the Powerline Dairy, LLC Water Conservation Area are shown on the map included in Appendix 1 of this management plan. Table 1 summarizes the water rights and points of diversion (wells) included in this Water Conservation Area.

All the stockwatering rights have a common place of use; that is, they are completely overlapped. Change applications were filed and approved in 2015 to completely overlap all of the irrigation water rights. This management plan proposes to completely overlap all places of use so that water from any point of diversion can be used for either stockwatering or irrigation purposes within any authorized place of use. The geographical description of the WCA-authorized place of use is shown in Table 2. This information is also included in Appendix 1.

Table 3 summarizes the total of the authorized quantities associated with the water rights enrolled in this WCA. It also summarizes the total average annual water use for the period 2012 through 2016, which is the historic period used as the basis for determination of the conservation reduction. A conservation reduction factor of ten percent (10%) was applied to the total average annual irrigation water use to determine the basis for the quantity of permissible groundwater withdrawal. The sum of this quantity and the average annual stockwater use during the same period was then multiplied by five (5), which is the term of the WCA, to arrive at the total quantity of permissible groundwater use that is authorized by this WCA.

# POWERLINE DAIRY, LLC WATER CONSERVATION AREA MANAGEMENT PLAN

Table 1 – Water Rights and Points of Diversion Included in the Powerline Dairy, LLC WCA

WATER RIGHT FILE NO.	WELL ID NO.	BENEFICIAL USE*	AUTHORIZED QUANTITY (AF)	P/D DIST. FROM SE SECTION CORNER		
				SEC-TWP-RGE	NORTH	WEST
12,932	6	STK	224.25	27-26S-27W	660 FT	2550 FT
23,398	2	STK	160.00	28-26S-27W	1320 FT	1310 FT
25,265	11	STK	167.70	27-26S-27W	3317 FT	1664 FT
26,490	12	STK	167.70	27-26S-27W	2990 FT	5000 FT
9,778	1	IRR	308.00	23-26S-27W	4580 FT	2480 FT
10,976	6	IRR	59.00	17-26S-27W	3200 FT	3860 FT
10,976	3	IRR	88.00	17-26S-27W	1320 FT	3940 FT
10,976	5	IRR	91.00	17-26S-27W	2842 FT	2383 FT
14,591	4	IRR	272.00	18-26S-27W	2669 FT	954 FT
17,593	2	IRR	239.00	23-26S-27W	1320 FT	3980 FT
17,594	3	IRR	280.00	23-26S-27W	1351 FT	1734 FT
19,042	3	IRR	272.00	26-26S-27W	5040 FT	2900 FT
19,043	2	IRR	272.00	14-26S-27W	1980 FT	3940 FT
19,543	2	IRR	130.00	27-26S-27W	1320 FT	3960 FT
19,543	7	IRR		27-26S-27W	1060 FT	3960 FT
19,543	8	IRR		27-26S-27W	1190 FT	3960 FT
20,172	2	IRR	272.00	18-26S-27W	1320 FT	1320 FT
20,172	6	IRR	165.00	17-26S-27W	3200 FT	3860 FT
20,172	3	IRR	141.00	17-26S-27W	1320 FT	3940 FT
20,172	4	IRR	272.00	17-26S-27W	1320 FT	1310 FT
20,172	5	IRR	137.00	17-26S-27W	2842 FT	2383 FT
20,881	2	IRR	272.00	20-26S-27W	1335 FT	1320 FT
20,882	1	IRR	272.00	21-26S-27W	3975 FT	3970 FT
20,882	2	IRR	272.00	21-26S-27W	3975 FT	1345 FT
24,842	1	IRR	272.00	22-26S-27W	3960 FT	1350 FT
24,842	2	IRR	272.00	22-26S-27W	1629 FT	1355 FT
25,531	3	IRR	272.00	22-26S-27W	1295 FT	3960 FT
25,531	4	IRR	272.00	22-26S-27W	3940 FT	3950 FT
27,625	2	IRR	26.00	14-26S-27W	1980 FT	3940 FT
27,625	4	IRR	342.00	23-26S-27W	5000 FT	4680 FT
GY8	6	IRR	200.00	17-26S-27W	3200 FT	3860 FT
GY8	3	IRR		17-26S-27W	1320 FT	3940 FT
GY8	5	IRR		17-26S-27W	2842 FT	2383 FT

Legend:      STK = stockwatering use      IRR = irrigation use      AF = acre-feet/year  
                  P/D = point of diversion      SEC-TWP-RGE = Section, Township and Range

# POWERLINE DAIRY, LLC WATER CONSERVATION AREA MANAGEMENT PLAN

**Table 2 – Place of Use for the Powerline Dairy, LLC WCA**

Sec.	Twp.	Range	NE 1/4				NW 1/4				SW 1/4				SE 1/4				TOTAL ACRES	
			NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4		
27	26S	27W	40	40	40	40														Dairy
23	26S	27W	26	37	40	26	34	5	8	40	30	28	35	29	19	39	37	18		451
14	26S	27W					2	2	40	40	40	40	40	40						244
26	26S	27W					34	34	34	34										136
8	26S	27W															2	2		4
17	26S	27W	36	34	23	24	29	39	40	29	38	40	40	38	38	38	40	40		566
18	26S	27W	29	30	33	31									40	40	31	31		265
20	26S	27W							14	16	39	36	10	8	31	33	30	28		245
21	26S	27W	32	31	32	32	32	31	34	32										256
22	26S	27W	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	544
27	26S	27W									30.5	30.5	30.5	30.5			30	30		182

Total Irrigated Acres: 2,893

**Table 3 – Summary of Conservation Reduction and Total Permissible Quantity of Withdrawal**

	STOCKWATERING	IRRIGATION	TOTAL
<b>AUTHORIZED QUANTITY</b>	719.65 AF	5,470.00 AF	6,189.65 AF
<b>2012 – 2016 AVERAGE USE</b>	643.34 AF	4,350.51 AF	4,993.85 AF
<b>10% REDUCTION OF AVERAGE IRRIGATION USE</b>			3,915.46 AF
<b>BASIS FOR PERMISSIBLE QUANTITY OF WITHDRAWAL</b>	643.34 AF	3,915.46 AF	4,558.80 AF
<b>TOTAL PERMISSIBLE QUANTITY OF WITHDRAWAL (5 x BASIS)</b>			22,794.00 AF

### Findings Regarding Groundwater Conditions

K.S.A. 82a-745 and K.S.A. 82a-1036(a) through (d) require a finding that one of the following conditions be present within the area proposed as a Water Conservation Area:

1. Groundwater levels in the area in question are declining or have declined excessively;
2. The rate of withdrawal of groundwater in the area equals or exceeds the rate of recharge within such area;
3. Preventable waste of water is occurring or may occur within the area in question; or
4. Unreasonable deterioration of the quality of water is occurring or may occur within the area in question.

The participating water right owners have determined that the following conditions exist:

- Groundwater levels within T26S R27W, Gray County, have declined excessively and continue to decline under the current levels of water use. The amount of decline has been documented by the Kansas Geological Survey and the Kansas Department of Agriculture, Division of Water Resources. Two water level observation wells are located in T26S R27W: one in the SW ¼ of Section 27 near the dairy and the other in the NE ¼ of Section 18. Both observation wells are within the geographical boundaries of this Water Conservation Area. The monitoring data indicate water level declines ranging from 45 to 60 feet in this area.

## **POWERLINE DAIRY, LLC WATER CONSERVATION AREA MANAGEMENT PLAN**

- The Kansas Geological Survey provided groundwater data that was used to develop the “Water Levels” section of the *Kansas High Plains Aquifer Atlas*. This information relates to Sections 13 through 36 in T26S R27W, which encompasses the geographical area of this WCA. The data indicate that approximately 62% of the predevelopment saturated thickness of the local aquifer has been depleted. The current average annual decline of saturated thickness in this area is slightly greater than two feet.

This information provides evidence that groundwater levels within this area have declined excessively and are continuing this trend. The loss of saturated thickness also implies that the rate of groundwater withdrawal is substantially greater than the rate of aquifer recharge. These conditions indicate a diminishing groundwater resource and justify the establishment of a Water Conservation Area in this region.

### **Evaluation of Existing WCA (2017-2021)**

Powerline Dairy, LLC received approval to enroll in a WCA on October 3, 2018. Initial consultations with KDA-DWR began in July 2017, and the approved term of the WCA was from January 1, 2017, through December 31, 2021. The total permissible quantity of groundwater withdrawal for the five-year term of the WCA was 22,794.00 AF. Stockwater use was limited to 5,544.50 AF (1,108.90 AF/year) and irrigation use was limited to 19,577.30 AF (3,915.46 AF/year). The permissible quantity of stockwater was based on plans to expand the facility and increase the headcount. At this time, the expansion has not been completed. Water use during the term of the WCA is summarized below in Table 4.

**Table 4 - Existing WCA Water Use (2017-2021)**

BENEFICIAL USE	STOCKWATER**	IRRIGATION	TOTAL
<b>2017-2021 WCA AVERAGE ANNUAL USE*</b>	600.50 AF	3,746.10 AF	4,346.60 AF
<b>2017-2021 TOTAL USE</b>	3,002.52 AF	18,730.52 AF	21,733.04 AF
<b>2017-2021 WCA AUTHORIZED QUANTITY</b>	5,544.50 AF	19,577.30 AF	22,794.00 AF
<b>2017-2021 WCA REMAINDER QUANTITY*</b>	2,541.98 AF	846.78 AF	1,060.96 AF

\*Calculations made using reported facility water use. See Appendix 2.

\*\*Authorized stockwater quantities established for planned expansion. Comparison of use to maximum reasonable quantity at existing capacity included in Appendix 2.

From January 1, 2017, through December 31, 2021, 3,002.52 AF of water was used for stock purposes. This quantity represents 54.2% of the total WCA stock allotment. Total irrigation use from January 1, 2017, through December 31, 2021, was 18,730.52 AF. This quantity represents 95.7% of the total WCA irrigation allotment.

Total water use for the term of the WCA was 21,733.04 AF; 95.3% of the total WCA allotment. This leaves a total remainder quantity of 1,060.96 AF. Reductions in water use have occurred due to more intensive management, modifying crop plans, implementing water-saving irrigation procedures, and more effectively

## **POWERLINE DAIRY, LLC WATER CONSERVATION AREA MANAGEMENT PLAN**

managing wastewater applications. During the 2012-2016 five-year span, Powerline Dairy, LLC utilized 24,969.25 AF of groundwater. Implementation of the WCA resulted in a reduction of 3,236.21 AF from historic use; a 13% reduction.

In the previously approved WCA, it was agreed that Powerline Dairy, LLC. could "elect to deposit the remainder quantity into a subsequent WCA Agreement that is governed by this management plan or revised versions thereof. Such a deposit shall be in addition to the total annual quantity of permissible groundwater withdrawal determined for the subsequent WCA Agreement." Powerline Dairy, LLC requests fifty percent (50%) of the remainder quantity be carried forward for this renewed WCA term. This would result in the carryover of 530.48 AF. The goal is to bank water to use later if needed. Water saved will be far more beneficial than if it is used at a time when it is needed in the future. The primary goal of Powerline Dairy, LLC is to save the banked water, if possible.

### **Corrective Control Provisions and Plan for Conservation**

The following corrective control provisions pertaining to the Powerline Dairy, LLC Water Conservation Area will be in effect during the term of the WCA Agreement:

1. The term of the WCA Agreement shall extend from January 1, 2022, through December 31, 2026.
2. The quantity of permissible groundwater withdrawal during the term of this WCA shall be limited to 22,794.00 AF plus half of the remainder quantity from the 2017-2021 WCA (530.48 AF) for a total quantity of permissible groundwater withdrawal of 23,324.48 AF.
3. Stockwater use shall be limited to 1,108.9 AF per year. This is the total maximum quantity of water that will be diverted from points of diversion currently authorized for irrigation or stockwatering to support the planned dairy expansion. This limitation is based upon reasonable consumption rates for dairy operations. Refer to Appendix 3 for information documenting the determination of this quantity. A term permit will be filed to obtain authorization for change in use. Additional quantity obtained for stockwatering will be offset by reduced irrigation use of the subject water right.

## **POWERLINE DAIRY, LLC WATER CONSERVATION AREA MANAGEMENT PLAN**

4. The four (4) wells currently authorized for stockwatering use shall be subject to the following limitations:
  - a. The well associated with File No. 12,932 shall be limited to an annual allocation of 400.00 AF and a rate of 400 gallons per minute (gpm)
  - b. The well associated with File No. 25,265 shall be limited to an annual allocation of 400.00 AF and a rate of 310 gpm
  - c. The well associated with File No. 23,398 shall be limited to an annual allocation of 160.00 AF and a rate of 380 gpm
  - d. The well associated with File No. 26,490 shall be limited to an annual allocation of 167.70 AF and a rate of 200 gpm
  - e. The total aggregate annual use of File Nos. 12,932, 25,265, 23,398 and 26,490 shall not exceed 719.65 AF
  
5. All wells currently authorized for irrigation use that are included in this WCA shall be subject to the following limitations:
  - a. Any irrigation well may pump up to 130% of its authorized quantity in any calendar year during the term of this WCA
  - b. Each irrigation well shall be limited to a quantity that shall not exceed five (5) times its authorized quantity during the five-year term of this WCA
  - c. The total aggregate use of all irrigation wells included in this WCA shall not exceed a quantity equivalent to five (5) times 3,915.46 AF, which is 19,577.30 AF, during the five-year term of this WCA. The 3,915.46 AF quantity represents the ten percent (10%) reduction of average irrigation use as stated in Table 3.
  - d. All irrigation wells included in this WCA shall be operated at rates which do not exceed their corresponding authorized rates of diversion.
  - e. Total irrigation use in any calendar year shall not exceed 5,470.00 AF, which is the total aggregate authorized quantity of all irrigation water rights included in this WCA.
  
6. In the event of a catastrophic well failure, a term permit must be filed and approved by the Chief Engineer if any of the limitations stated in Corrective Control Provisions 4 and 5 must be exceeded for emergency purposes.
  
7. Water rights may be pumped as directed by the owners. Water may be used for either stockwatering or irrigation at any location included in the WCA-authorized place of use. The owners may designate management units and allocate portions of the total quantity of permissible groundwater withdrawal to those management units.
  
8. Water currently authorized for irrigation use that is subsequently diverted for stockwatering use shall be measured in a manner that provides accurate quantification of each use from each point of diversion. The Water Commissioner of the DWR Garden City Field Office shall be notified of each multiple use and shall approve each metering or measurement system installation.

## **POWERLINE DAIRY, LLC WATER CONSERVATION AREA MANAGEMENT PLAN**

9. A remainder quantity is defined as the accumulated portion of the total quantity of permissible groundwater withdrawal that is not used during the term of the WCA Agreement. The participants of the Powerline Dairy, LLC WCA may elect to deposit the remainder quantity into a subsequent WCA Agreement that is governed by this management plan or revised versions thereof. Such a deposit shall be in addition to the total annual quantity of permissible groundwater withdrawal determined for the subsequent WCA Agreement. The credited portion of the remainder quantity may be carried forward through the term of the subsequent WCA Agreement until it is diverted.

### **Compliance Monitoring and Enforcement**

The participants acknowledge the compliance monitoring and enforcement provisions stated herein. This includes any specific provisions relating to measuring or reporting water usage.

#### Monitoring

Powerline Dairy, LLC or an authorized representative thereof will submit an annual report for each calendar year included in the term of this WCA. The annual report for each calendar year shall be submitted to the Chief Engineer no later than March 1<sup>st</sup> of the following year. The report will include a record of the following information:

- Beginning and ending flow meter readings for each point of diversion included in the WCA Agreement
- Quantity of water diverted by each point of diversion
- Locations where the water was used
- Acres irrigated
- Total quantity of water diverted during the calendar year
- Unused portion of the total quantity of permissible groundwater withdrawal.

These records will be maintained in electronic and paper format. Copies will be made available to Kansas Department of Agriculture, Division of Water Resources staff upon request.

The participants acknowledge that the measurement chambers of the water flow meters within this WCA will be sealed by Kansas Department of Agriculture, Division of Water Resources staff. These seals will remain in place for the duration of this management plan to ensure accurate water use records.

All water right owners agree to install and maintain water flow meters and appurtenances that comply with the requirements of the Division of Water Resources and Southwest Kansas Groundwater Management District No. 3. Any water right owner or authorized designee who finds a flow meter that is inoperable or inaccurate shall notify the Garden City Field Office of the Division of Water Resources within 48 hours of discovery. Whenever an inoperable or inaccurate meter is repaired or replaced, the water right owner or authorized designee shall notify the Garden City Field Office of the Division of Water Resources within seven (7) days on a form prescribed by the Chief Engineer of the water flow meter installation or any water flow meter repair or replacement event.

# **POWERLINE DAIRY, LLC WATER CONSERVATION AREA MANAGEMENT PLAN**

## Enforcement

The participants acknowledge that failure to abide by the terms of this agreement may result in the termination of the WCA. Failure to abide by the terms, conditions, and limitations of the individual water rights will be subject to the civil penalties outlined in K.A.R. 5-14-10 and 5-14-12.

## **Review of Effectiveness**

The Powerline Dairy, LLC WCA management plan will be evaluated annually by the participants. Revisions and amendments to the management plan will be developed as needed and submitted to the Chief Engineer for consideration. A formal review shall be conducted during the final year of the term to ensure that the provisions of this management plan are appropriate and are achieving the stated goals of the Powerline Dairy, LLC WCA. This review shall be completed by the Chief Engineer in consultation with the participants by October 31, 2026. Information obtained from the observation wells located in the SW ¼ of Section 27 T26S R27W and the NE ¼ of Section 18 T26S R27W will be considered in this review. If the Chief Engineer finds that this WCA has achieved its goals and that there are no legal or physical conditions that require it to be altered or terminated, then the Powerline Dairy, LLC WCA may be continued upon request of the participants. The management plan may be revised based upon the findings of the Chief Engineer and with the concurrence of all participating parties. The annual report for the last year in the term of this WCA shall indicate the total water use during the WCA period.

## **Participant Addition, Withdrawal, and Removal**

The participants acknowledge that water right owners and their associated water rights and geographic boundaries may be added to this WCA upon written notification to the Chief Engineer by the owners of each enrolling water right. Such notification shall include the legal descriptions of the areas to be added. A participant may withdraw from the WCA through written notification to the Chief Engineer that is signed by the owners of the participating water right or rights to be withdrawn from the WCA.

If the addition or withdrawal of water rights requires modification of the permissible quantities of groundwater withdrawal, geographical boundaries, places of use, terms, or conditions of the original WCA, then the management plan shall be revised to incorporate such changes and the associated consent agreements shall be reaffirmed by all parties, after opportunity for comment on the proposed revisions by Southwest Kansas Groundwater Management District No. 3.

The Chief Engineer shall reserve the right to remove any participant from the Powerline Dairy, LLC WCA for repeated violations of their WCA Agreement and/or violations of state laws and regulations that pertain to water rights and legal use of water.

# **POWERLINE DAIRY, LLC WATER CONSERVATION AREA MANAGEMENT PLAN**

## **Termination**

The Powerline Dairy, LLC WCA Agreement may be terminated by written notification submitted to the Chief Engineer. Such notification will state the intent to terminate, any applicable reasons for termination, and shall be signed by all currently participating members of the WCA.

## **State Law**

The participants of the Powerline Dairy, LLC WCA acknowledge that this WCA is subject to compliance with all other applicable state laws. The participants in conjunction with the Division of Water Resources will monitor any changes in Kansas laws that may impact this management plan or existing WCA Agreements.

## **Notification to Nearby Owners**

The participants acknowledge that the Chief Engineer is required by state law to provide written notification to all water right owners with a point of diversion within ½ of a mile of the boundaries of this WCA. The Chief Engineer may consider information submitted by nearby owners when evaluating the potential for impairment of neighboring water rights.

## **Assurances**

None of the terms and conditions of this management plan or a WCA Agreement executed in accordance with this management plan shall result in any permanent change to the enrolled water rights.

## **Review of Other Applicable Requirements**

The Powerline Dairy, LLC WCA lies within the boundaries of Southwest Kansas Groundwater Management District No. 3. The rules and regulations pertaining to this groundwater management district (K.A.R. 5-23-1 through 5-23-15) were reviewed to determine if there were any provisions that would result in a greater level of water conservation than that contained in this management plan. No such provisions were identified.

The Powerline Dairy, LLC WCA is located within the boundaries of the Arkansas River Intensive Groundwater Use Control Area (IGUCA). No provisions of the Arkansas River IGUCA were noted that would prevent approval and implementation of the Powerline Dairy, LLC WCA.

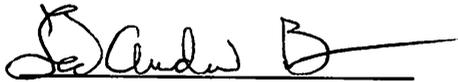
There is currently no approved Local Enhanced Management Area (LEMA) within the boundaries of this WCA. The participants acknowledge that this WCA may be terminated if a LEMA is established that has more stringent requirements, after due consideration has been given to past conservation by the participants.

# POWERLINE DAIRY, LLC WATER CONSERVATION AREA MANAGEMENT PLAN

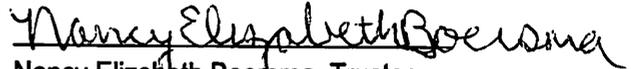
## Participants' Agreement

By signing below, we, the water right owners, agree that this management plan is fair and equitable. This management plan, provided to the Chief Engineer and water right owners, is the expressed written intent of the parties and the whole agreement between the parties. We, the water right owners, agree to be bound by all the terms contained in this management plan and understand that the provisions of this agreement shall be construed to give effect to the provisions listed. We, the water right owners, also agree that this management plan is the basis for a consent agreement among the Chief Engineer and the undersigned water right owners, and therefore any order and consent agreement issued by the Chief Engineer, designating this WCA, shall be binding upon all parties as the necessary formal implementation of this management plan.

**For the Participants:** All participating water right owners signing below, affirm their approval of this WCA management plan and, if approved by the Chief Engineer, allow consent to the Chief Engineer to formally approve the designation of this Water Conservation Area, described herein, by means of a Consent Agreement and Order.



Ted Andrew Boersma, Trustee  
Ted Andrew Boersma and Nancy Elizabeth  
Boersma Revocable Trust  
for Powerline Dairy, LLC



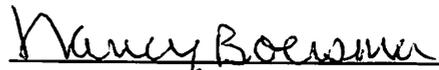
Nancy Elizabeth Boersma, Trustee  
Ted Andrew Boersma and Nancy Elizabeth  
Boersma Revocable Trust  
for Powerline Dairy, LLC



Ted Boersma, Manager  
Boersma Family, LLC



Ted Boersma, Owner  
Land in Sections 14, 23 & 26 T26S R27W



Nancy Boersma, Owner  
Land in Sections 14, 23 & 26 T26S R27W

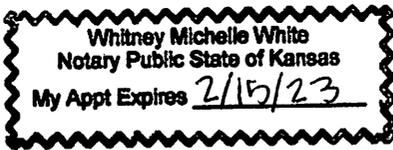
**POWERLINE DAIRY, LLC WATER CONSERVATION AREA MANAGEMENT PLAN**

ACKNOWLEDGEMENT OF NOTARY

STATE OF Kansas )  
 )  
COUNTY OF Gray ) SS

On this 16 day of December, 2021, before me, the undersigned Notary Public, personally appeared Ted Boersma, known to me (or satisfactorily proven) to be the person(s) whose name(s) is/are subscribed to the within instrument, and acknowledged that they executed the same for the purposes therein contained.

In Witness Whereof, I have hereunto set my hand and official seal.



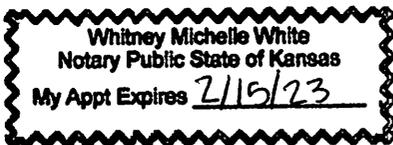
Whitney Michelle White  
Notary Public  
My Commission Expires 2/15/2023

Printed Name: Whitney Michelle White

STATE OF Kansas )  
 )  
COUNTY OF Gray ) SS

On this 16 day of December, 2021, before me, the undersigned Notary Public, personally appeared Nancy Boersma known to me (or satisfactorily proven) to be the person(s) whose name(s) is/are subscribed to the within instrument, and acknowledged that they executed the same for the purposes therein contained.

In Witness Whereof, I have hereunto set my hand and official seal.



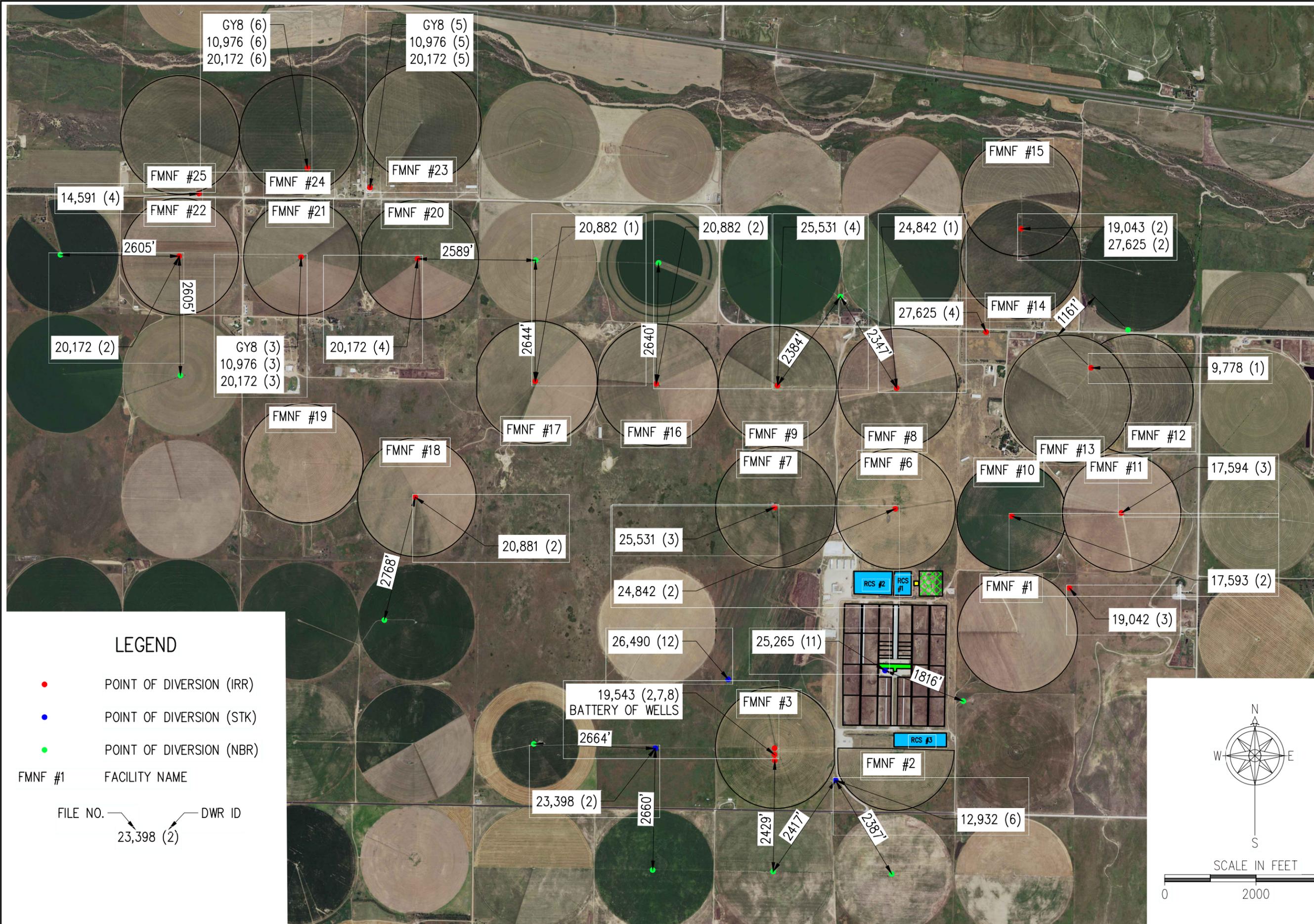
Whitney Michelle White  
Notary Public  
My Commission Expires 2/15/2023

Printed Name: Whitney Michelle White

# **POWERLINE DAIRY, LLC WATER CONSERVATION AREA MANAGEMENT PLAN**

## **APPENDIX 1**

Maps



DRAWN	DLB	DATE	11/17
CHECKED	FCM	DATE	11/17
APPROVED	FCM	DATE	11/17

**POWERLINE DAIRY, LLC**  
 WATER RIGHT POINT OF DIVERSION MAP  
 T26S R27W  
 GRAY COUNTY, KANSAS

1700 E. IRON  
 SALINA, KANSAS 67401  
 (785) 823-0097  
 1303 YUCCA STREET  
 SCOTT CITY, KANSAS 67871  
 (620) 872-2300

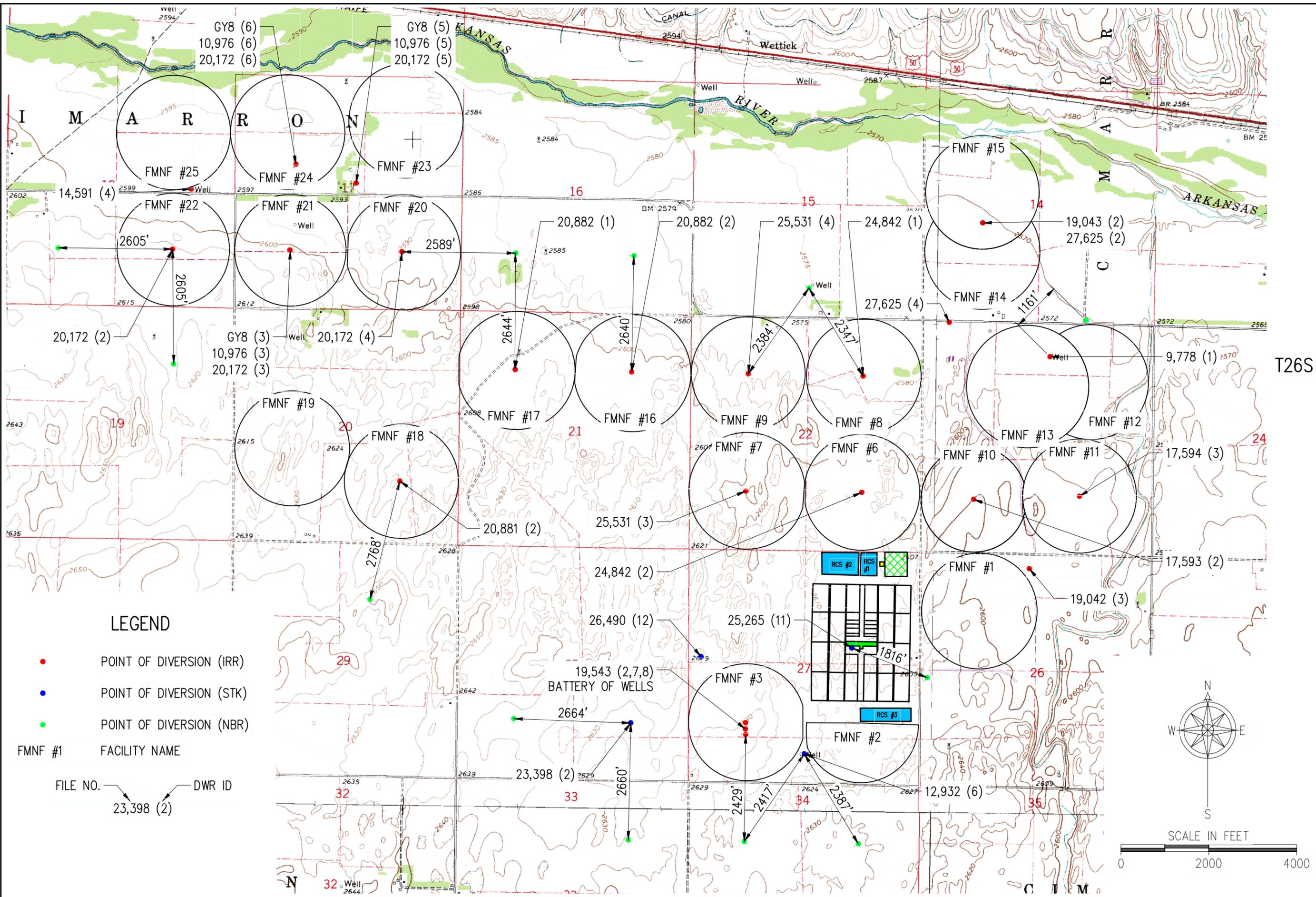
**KLA**  
 ENVIRONMENTAL  
 SERVICES, INC.

CAD FILE NAME:  
Plan View.dwg

SHEET NO. 1 OF 2

REV.	DATE	BY	DESCRIPTION	CHECK	APPROVE
1	10/21	CSG	UPDATE AERIAL IMAGERY	KMB	

## LOCATION MAP



**LEGEND**

- POINT OF DIVERSION (IRR)
- POINT OF DIVERSION (STK)
- POINT OF DIVERSION (NBR)
- FMNF #1 FACILITY NAME

FILE NO. → DWR ID  
 23,398 (2)



DRAWN	DLB	DATE	11/17
CHECKED	FCM	DATE	11/17
APPROVED	FCM	DATE	11/17

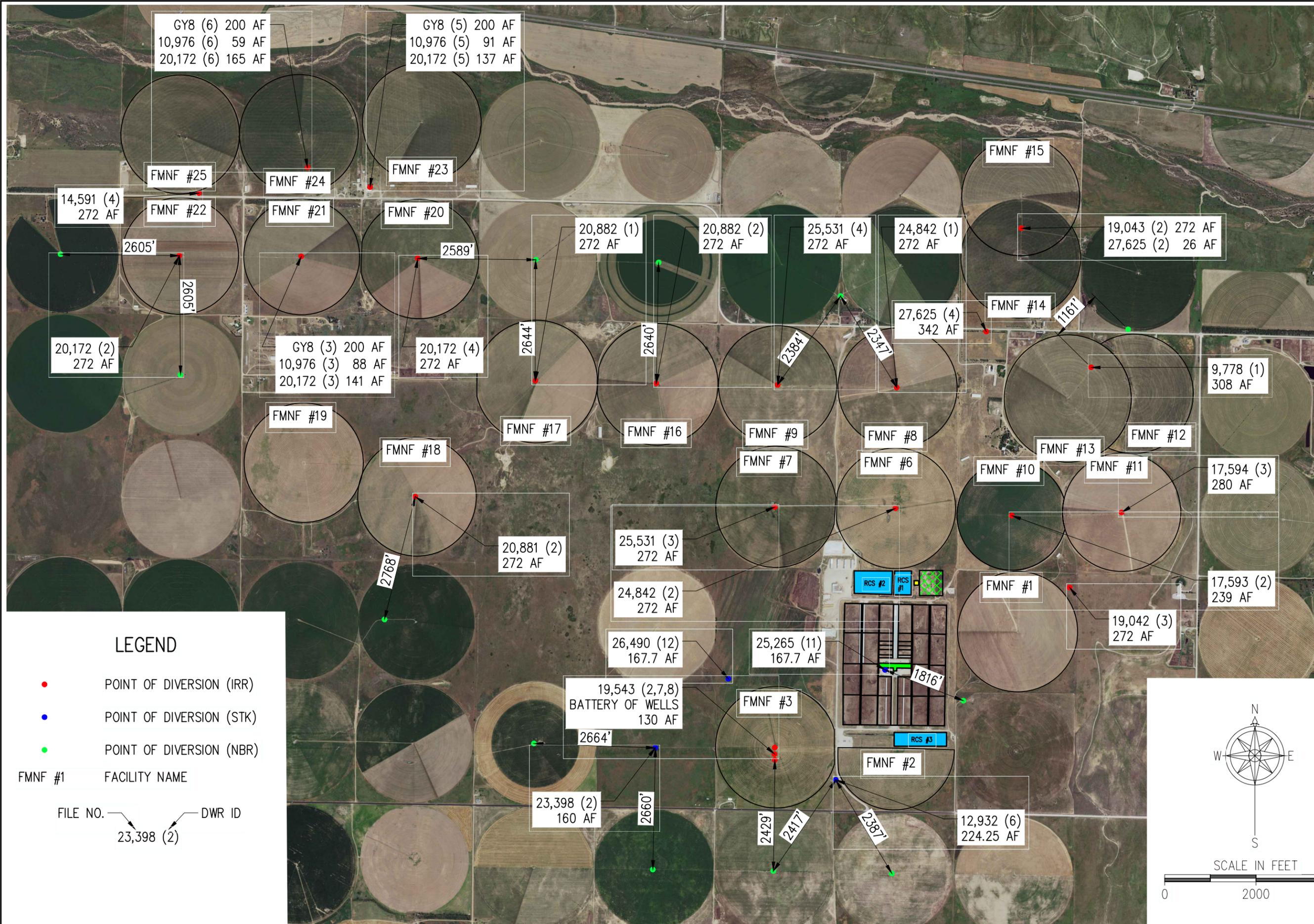
**POWERLINE DAIRY, LLC**  
 WATER RIGHT POINT OF DIVERSION MAP  
 T26S R27W  
 GRAY COUNTY, KANSAS

1700 E. IRON  
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 (785) 823-0097  
 1303 YUCCA STREET  
 SCOTT CITY, KANSAS 67871  
 (620) 872-2300

**LOCATION MAP**

R27W

T26S



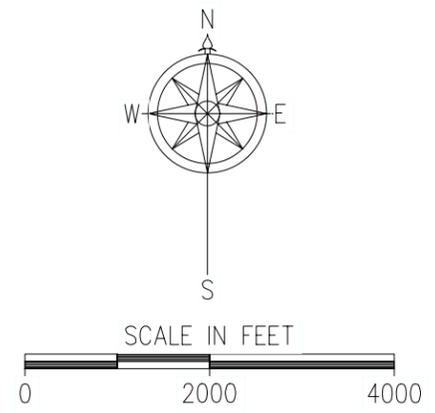
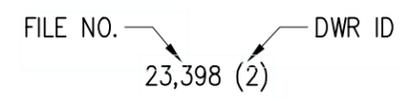
T26S

POWERLINE DAIRY, LLC  
 WATER RIGHT POINT OF DIVERSION MAP  
 T26S R27W  
 GRAY COUNTY, KANSAS

DRAWN	DLB	DATE	11/17
CHECKED	FCM	DATE	11/17
APPROVED	FCM	DATE	11/17

**LEGEND**

- POINT OF DIVERSION (IRR)
- POINT OF DIVERSION (STK)
- POINT OF DIVERSION (NBR)
- FMNF #1 FACILITY NAME



1	10/21	CSG	UPDATE AERIAL IMAGERY	KMB	
REV.	DATE	BY	DESCRIPTION	CHECK	APPROVE

R27W

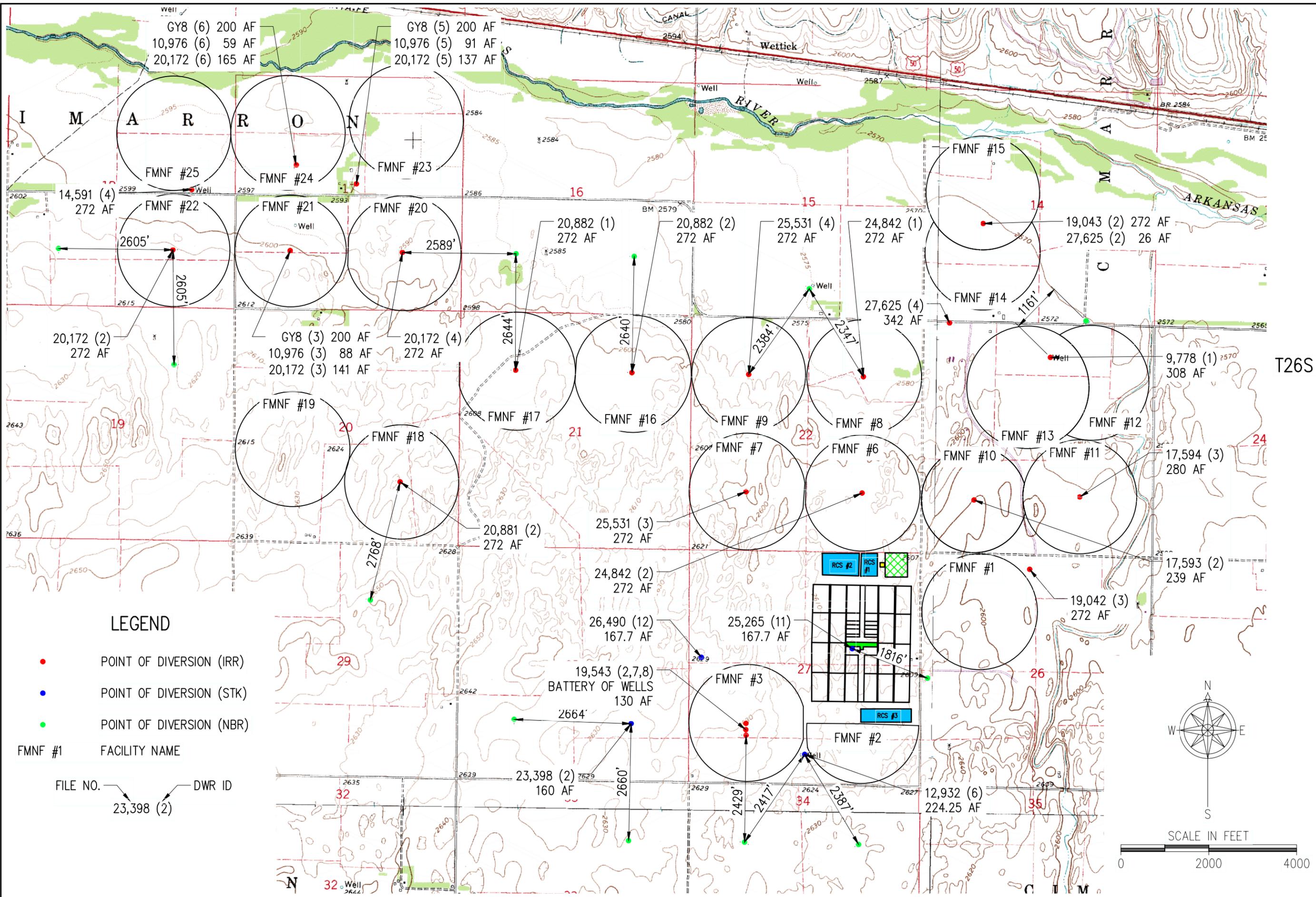
**QUANTITY MAP**

1700 E. IRON  
 SALINA, KANSAS 67401  
 (785) 823-0097

1303 YUCCA STREET  
 SCOTT CITY, KANSAS 67871  
 (620) 872-2300

CAD FILE NAME:  
 Plan View.dwg

SHEET NO. 1 OF 2



DRAWN	DLB	DATE	11/17
CHECKED	FCM	DATE	11/17
APPROVED	FCM	DATE	11/17

**POWERLINE DAIRY, LLC**  
 WATER RIGHT POINT OF DIVERSION MAP  
 T26S R27W  
 GRAY COUNTY, KANSAS

1700 E. IRON  
 SALINA, KANSAS 67401  
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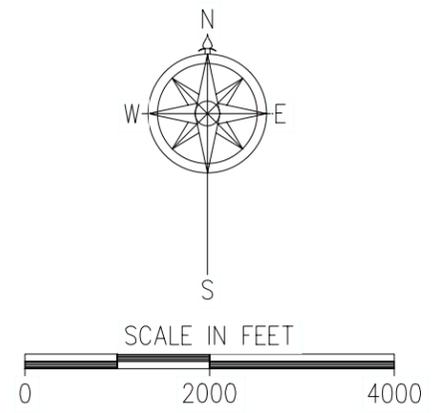
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 SCOTT CITY, KANSAS 67871  
 (620) 872-2300

CAD FILE NAME:  
 Plan View.dwg  
 SHEET NO. 2 OF 2

**LEGEND**

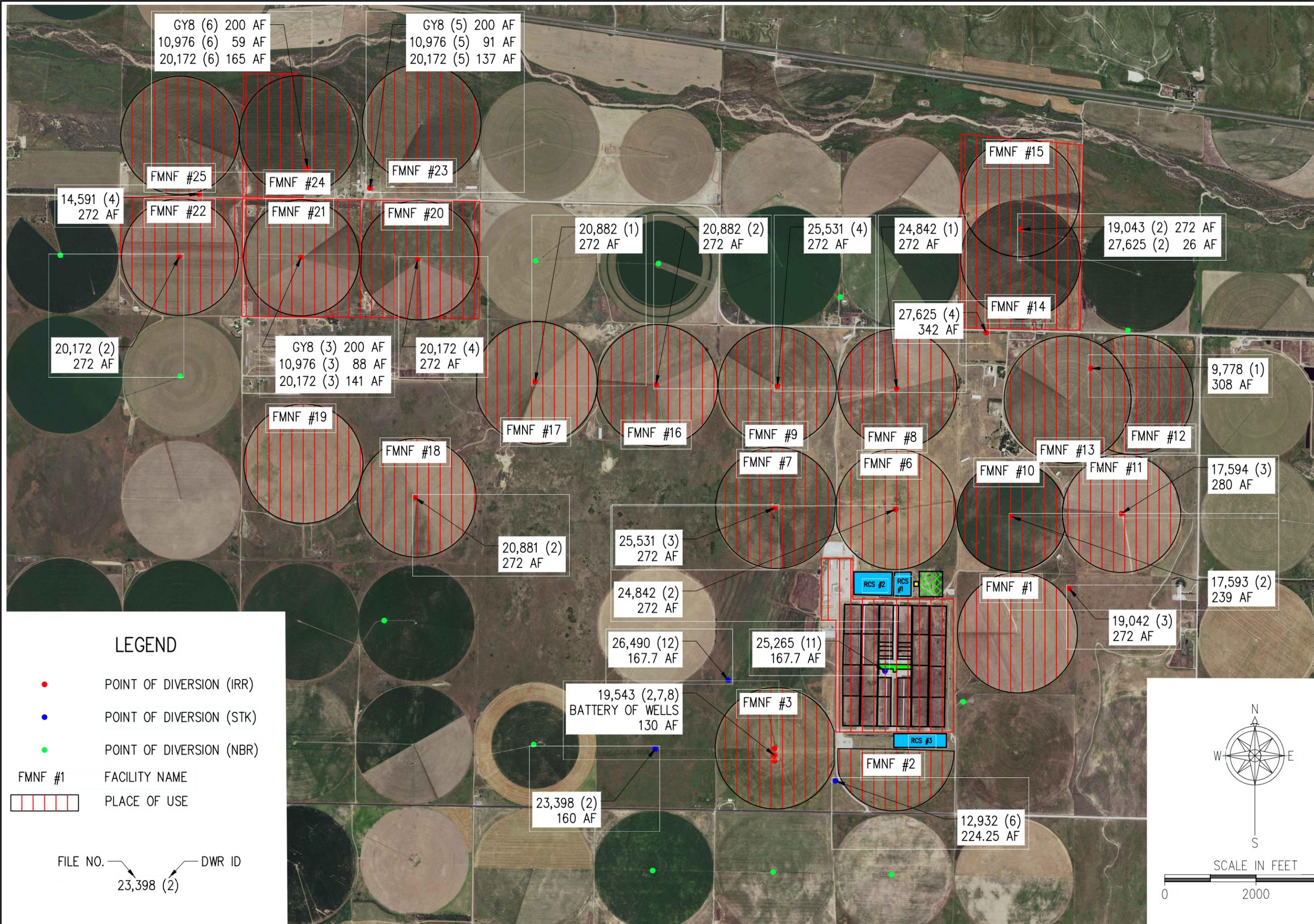
- POINT OF DIVERSION (IRR)
- POINT OF DIVERSION (STK)
- POINT OF DIVERSION (NBR)
- FMNF #1 FACILITY NAME

FILE NO. → 23,398 (2)  
 DWR ID →



R27W

**QUANTITY MAP**



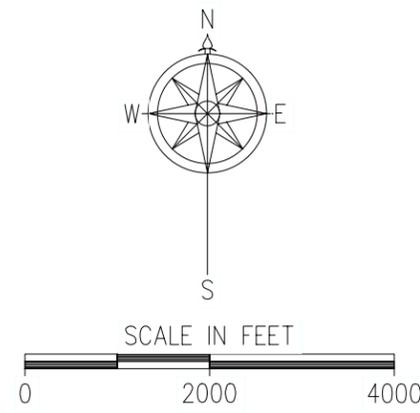
T26S

DRAWN	DLB	DATE	11/17
CHECKED	FCM	DATE	11/17
APPROVED	FCM	DATE	11/17

POWERLINE DAIRY, LLC  
 WATER RIGHT POINT OF DIVERSION MAP  
 T26S R27W  
 GRAY COUNTY, KANSAS

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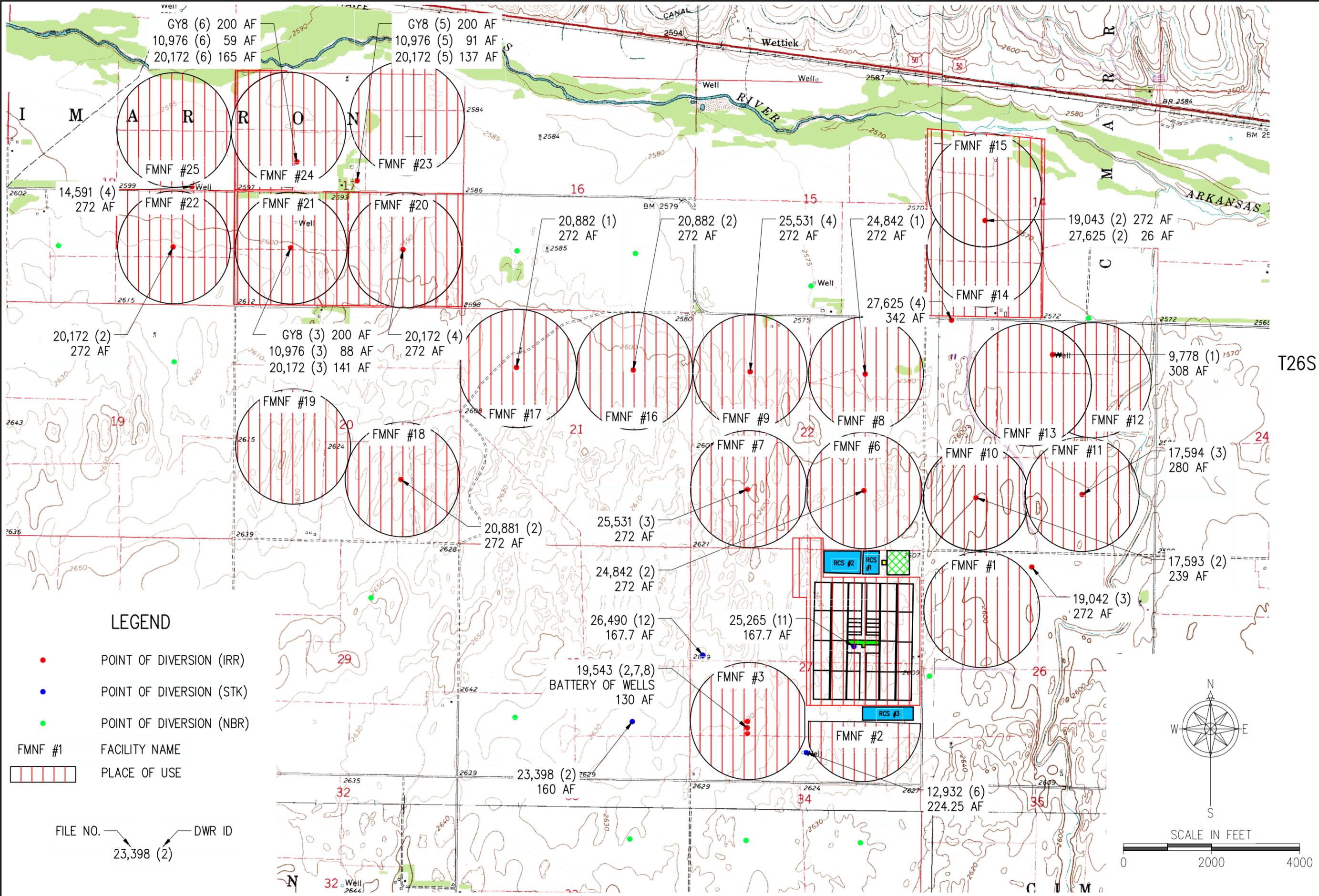
**KLA**  
 ENVIRONMENTAL  
 SERVICES, INC.



REV.	DATE	BY	DESCRIPTION	CHECK	APPROVE
1	10/21	CSG	UPDATE AERIAL IMAGERY	KMB	

R27W

PLACE OF USE MAP



**LEGEND**

- POINT OF DIVERSION (IRR)
- POINT OF DIVERSION (STK)
- POINT OF DIVERSION (NBR)
- FMNF #1 FACILITY NAME
- PLACE OF USE

FILE NO. → 23,398 (2) ← DWR ID



DRAWN	DLB	DATE	11/17
CHECKED	FCM	DATE	11/17
APPROVED	FCM	DATE	11/17

**POWERLINE DAIRY, LLC**  
 WATER RIGHT POINT OF DIVERSION MAP  
 T26S R27W  
 GRAY COUNTY, KANSAS

1700 E. IRON  
 SALINA, KANSAS 67401  
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 SCOTT CITY, KANSAS 67871  
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CAD FILE NAME:  
Plan View.dwg

**PLACE OF USE MAP**

**PLACE OF USE FOR POWERLINE DAIRY, LLC WCA**

Sec.	Twp.	Range	NE 1/4				NW 1/4				SW 1/4				SE 1/4				TOTAL ACRES
			NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	
23	26S	27W	26	37	40	26	34	5	8	40	30	28	35	29	19	39	37	18	451
14	26S	27W					2	2	40	40	40	40	40						244
26	26S	27W					34	34	34	34									136
8	26S	27W															2	2	4
17	26S	27W	36	34	23	24	29	39	40	29	38	40	40	38	38	38	40	40	566
18	26S	27W	29	30	33	31								40	40	31	31	265	
20	26S	27W							14	16	39	36	10	8	31	33	30	28	245
21	26S	27W	32	31	32	32	32	31	34	32									256
22	26S	27W	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	544
27	26S	27W									30.5	30.5	30.5	30.5			30	30	182

**TOTAL IRRIGATED ACRES = 2,893**

# **POWERLINE DAIRY, LLC WATER CONSERVATION AREA MANAGEMENT PLAN**

## **APPENDIX 2**

2017-2021 WCA Evaluation

**KLA ENVIRONMENTAL SERVICES, INC.**

PROJECT: **POWERLINE DAIRY, LLC**

LOCATION: **T26S R27W, GRAY COUNTY, KANSAS**

BY: CSG  
DATE: 1/11/2022

CHECKED BY: KMB  
DATE: 3/8/2022

**SUMMARY OF STOCKWATER USE 2017-2021**

MONTH	2017			2018			2019			2020			2021		
	USE (GAL)	AVG HEAD	GAL/HEAD/DAY												
JANUARY	17,980,253	9,901	58.58	14,480,814	11,183	41.77	23,062,276	10,464	71.1	13,914,024	9,352	47.99	19,577,753	9,845	64.15
FEBRUARY	17,790,816	10,146	62.62	17,885,917	11,233	56.87	19,708,544	10,424	67.52	13,825,101	9,376	52.66	16,833,831	9,907	60.69
MARCH	18,616,457	9,914	60.57	15,691,089	11,110	45.56	21,588,979	10,199	68.28	15,168,410	9,510	51.45	18,783,729	9,686	62.56
APRIL	19,567,842	10,012	65.15	12,755,659	9,527	44.63	22,310,859	9,412	79.02	14,415,045	9,560	50.26	17,850,621	9,693	61.39
MAY	20,412,782	9,807	67.14	13,039,023	9,450	44.51	17,308,268	8,401	66.46	14,255,445	9,680	47.51	18,657,457	9,256	65.02
JUNE	18,945,011	9,855	64.08	16,281,488	9,593	56.57	21,445,068	8,403	85.07	15,585,960	10,182	51.02	18,905,478	9,385	67.15
JULY	19,151,047	9,995	61.81	16,201,357	9,879	52.90	11,770,541	8,425	45.07	16,884,449	9,509	57.28	19,457,281	9,651	65.04
AUGUST	18,167,368	10,060	58.25	17,911,072	10,081	57.31	9,365,377	8,405	35.94	17,181,269	10,194	54.37	19,628,678	10,055	62.97
SEPTEMBER	18,645,372	10,201	60.93	17,454,719	10,228	56.89	8,520,590	8,652	32.83	18,690,608	10,456	59.58	16,652,961	9,985	55.59
OCTOBER	17,942,603	10,380	55.76	15,915,658	9,584	53.57	7,727,903	8,768	28.43	18,477,579	10,076	59.16	12,395,359	9,878	40.48
NOVEMBER	17,741,039	10,300	57.41	14,305,628	9,635	49.49	6,621,699	8,856	24.92	16,037,327	10,036	53.27	7,258,611	9,739	24.84
DECEMBER	20,789,506	10,705	62.65	14,929,242	9,899	48.65	6,485,000	8,761	23.88	18,266,439	9,969	59.11	11,155,240	10,013	35.94
ANNUAL	225,750,096	10,106	61.20	186,851,667	10,117	50.60	175,915,104	9,098	52.97	192,701,656	9,825	53.74	197,156,999	9,758	55.36
	= 692.80 AF			= 573.43 AF			= 539.86 AF			= 591.38 AF			= 605.05 AF		

**KLA ENVIRONMENTAL SERVICES, INC.**

PROJECT: **POWERLINE DAIRY, LLC**

LOCATION: **T26S R27W, GRAY COUNTY, KANSAS**

BY: CSG  
DATE: 1/11/2022

CHECKED BY: KMB  
DATE: 3/8/2022

**SUMMARY OF STOCKWATER USE FOR WCA PERIOD JANUARY 2017 - DECEMBER 2021**

YEAR	ANNUAL WATER USE IN ACRE-FEET BY STOCKWATER FILE NO.			
	12,932 (6)	23,398 (2)	25,265 (11)	26,490 (12)
2017	344.71	94.16	244.69	9.24
2018	170.89	65.01	137.18	0.00
2019	169.00	62.33	181.03	0.00
2020	265.80	34.19	244.05	0.00
2021	318.45	85.58	163.30	0.00
<b>TOTAL USE:</b>	<b>1,268.84</b>	<b>341.27</b>	<b>970.26</b>	<b>9.24</b>
ANNUAL ALLOTMENT:	400.00	160.00	400.00	167.70
WCA TERM ALLOTMENT:	2,000.00	800.00	2,000.00	838.50
<b>REMAINING ALLOTMENT:</b>	<b>731.16</b>	<b>458.73</b>	<b>1,029.74</b>	<b>829.26</b>

(ANNUAL STOCK WELL ALLOTMENTS ARE FROM CORRECTIVE CONTROL PROVISION 4)

ANNUAL WATER USE IN ACRE-FEET BY IRR FILE NO. FOR STOCK USE
24,842 (2) [FMNF #6]
0.00
200.33
127.51
47.34
37.73
<b>412.91</b>

TOTAL ANNUAL USE (AF)	AVERAGE HEAD COUNT	RATE (GALLONS/HEAD/DAY)
692.80	10,106	61.20
573.42	10,117	50.60
539.86	9,098	52.97
591.38	9,825	53.74
605.05	9,758	55.36
<b>AVERAGE RATE =</b>		<b>54.77</b>

**KLA ENVIRONMENTAL SERVICES, INC.**

PROJECT: **POWERLINE DAIRY, LLC**

LOCATION: **T26S R27W, GRAY COUNTY, KANSAS**

BY: CSG  
DATE: 1/11/2022

CHECKED BY: KMB  
DATE: 3/8/2022

**SUMMARY OF STOCKWATER USE FOR WCA PERIOD JANUARY 2017 - DECEMBER 2021**

YEAR	ANNUAL USE FROM STOCKWATER WELLS (AF)	ANNUAL USE FROM IRRIGATION WELLS (AF)	TOTAL ANNUAL USE (AF)
2017	692.80	0.00	692.80
2018	373.09	200.33	573.42
2019	412.35	127.51	539.86
2020	544.04	47.34	591.38
2021	567.33	37.73	605.05
TOTAL	2,589.61	412.91	3,002.52
AVERAGE	517.92	82.58	600.50

ANNUAL WCA AUTHORIZED STOCK WELLS QUANTITY = **719.65 AF**  
 2017-2021 WCA AUTHORIZED STOCK WELLS QUANTITY = 3,598.25 AF  
 2017-2021 WCA USED QUANTITY = 2,589.61 AF 72.0%  
**2017-2021 WCA REMAINDER QUANTITY = 1,008.64 AF 28.0%**

(CORRECTIVE CONTROL PROVISION 4e)  
 (ANNUAL AUTHORIZED STOCK WELLS TIMES 5 YEARS)

ANNUAL WCA AUTHORIZED TOTAL STOCK USE QUANTITY = **1,108.90 AF**  
 2017-2021 WCA AUTHORIZED TOTAL STOCK USE QUANTITY = 5,544.50 AF  
 2017-2021 WCA USED QUANTITY = 3,002.52 AF 54.2%  
**2017-2021 WCA REMAINDER QUANTITY = 2,541.98 AF 45.8%**

(CORRECTIVE CONTROL PROVISION 3)  
 (ANNUAL AUTHORIZED STOCK USE TIMES 5 YEARS)

ANNUAL WCA AUTHORIZED TOTAL STOCK USE QUANTITY = **940.90 AF**  
 2017-2021 WCA AUTHORIZED TOTAL STOCK USE QUANTITY = 4,704.50 AF  
 2017-2021 WCA USED QUANTITY = 3,002.52 AF 63.8%  
**2017-2021 WCA REMAINDER QUANTITY = 1,701.98 AF 36.2%**

(MAXIMUM REASONABLE CONSUMPTION WITHOUT EXPANSION)  
 (MAXIMUM REASONABLE CONSUMPTION TIMES 5 YEARS)

1 AF = 325,851 GALLONS

**KLA ENVIRONMENTAL SERVICES, INC.**

PROJECT: **POWERLINE DAIRY, LLC**

LOCATION: **T26S R27W, GRAY COUNTY, KANSAS**

BY: CSG  
DATE: 1/11/2022

CHECKED BY: KMB  
DATE: 3/8/2022

**SUMMARY OF IRRIGATION USE FOR WCA PERIOD 2017 - 2021**

YEAR	ANNUAL WATER USE IN ACRE-FEET BY IRRIGATION FILE NO.																				TOTAL ANNUAL USE (AF)	MAXIMUM ANNUAL WCA ALLOTMENT (AF)	REMAINING ANNUAL WCA ALLOTMENT (AF)
	GY8 (3), 10,976 (3), & 20,172 (3) [FMNF #21] <sup>1</sup>	GY8 (5), 10,976 (5), & 20,172 (5) [FMNF #23] <sup>1</sup>	GY8 (6), 10,976 (6), & 20,172 (6) [FMNF #24] <sup>1</sup>	9,778 (1) [FMNF #13]	14,591 (4) [FMNF #25]	17,593 (2) [FMNF #10]	17,594 (3) [FMNF #11]	19,042 (3) [FMNF #1]	19,043 (2) & 27,625 (2) [FMNF #15]	19,543 (2), (7), & (8) [FMNF #3 & FMNF #2]	20,172 (4) [FMNF #20]	20,172 (2) [FMNF #22]	20,881 (2) [FMNF #18 & FMNF #19]	20,882 (1) [FMNF #17]	20,882 (2) [FMNF #16]	24,842 (1) [FMNF #8]	24,842 (2) [FMNF #6]	25,531 (3) [FMNF #7]	25,531 (4) [FMNF #9]	27,625 (4) [FMNF #12 & FMNF #14]			
2017	226.67	229.71	209.40	243.22	173.71	62.66	203.48	179.85	164.05	0.00	235.38	217.72	222.27	211.82	155.31	174.50	41.49	179.26	217.50	204.15	3,552.13	5,470.00	1,917.87
2018	161.91	273.59	245.19	261.97	207.03	190.63	118.58	174.20	287.21	0.00	230.75	227.26	193.22	202.62	225.58	130.41	143.63	196.23	239.24	257.73	3,966.95	5,470.00	1,503.05
2019	192.58	268.31	229.47	268.73	215.62	104.14	193.28	186.67	245.75	0.00	240.55	47.71	269.25	225.45	272.77	215.91	8.73	214.58	268.63	266.40	3,934.53	5,470.00	1,535.47
2020	206.33	293.71	273.03	353.12	236.89	152.83	183.68	195.56	272.97	0.00	279.70	155.07	272.84	87.14	237.67	245.79	0.00	182.85	295.27	343.21	4,267.65	5,470.00	1,202.35
2021	138.55	213.14	195.31	276.45	190.09	146.52	162.55	183.79	5.75	0.00	93.45	33.75	227.60	162.99	141.26	188.89	0.99	190.16	198.08	259.94	3,009.26	5,470.00	2,460.74
<b>TOTAL USE:</b>	<b>926.04</b>	<b>1,278.45</b>	<b>1,152.41</b>	<b>1,403.49</b>	<b>1,023.34</b>	<b>656.78</b>	<b>861.56</b>	<b>920.08</b>	<b>975.72</b>	<b>0.00</b>	<b>1,079.82</b>	<b>681.50</b>	<b>1,185.18</b>	<b>890.03</b>	<b>1,032.59</b>	<b>955.50</b>	<b>194.85</b>	<b>963.07</b>	<b>1,218.72</b>	<b>1,331.42</b>	<b>18,730.52</b>		
BASE ALLOTMENT <sup>2</sup> :	290.67	295.67	294.67	308.00	272.00	239.00	280.00	272.00	298.00	130.00	272.00	272.00	272.00	272.00	272.00	272.00	272.00	272.00	272.00	342.00	5,470.00		
WCA ANNUAL ALLOTMENT <sup>3</sup> :	377.87	384.37	383.07	400.40	353.60	310.70	364.00	353.60	387.40	169.00	353.60	353.60	353.60	353.60	353.60	353.60	353.60	353.60	353.60	444.60	5,470.00		
TOTAL WCA ALLOTMENT <sup>4</sup> :	1,453.33	1,478.33	1,473.33	1,540.00	1,360.00	1,195.00	1,400.00	1,360.00	1,490.00	650.00	1,360.00	1,360.00	1,360.00	1,360.00	1,360.00	1,360.00	1,360.00	1,360.00	1,360.00	1,710.00	19,577.30		
REMAINING ALLOTMENT:	527.29	199.88	320.93	136.51	336.66	538.23	538.44	439.92	514.28	650.00	280.18	678.50	174.82	469.97	327.41	404.51	1,165.15	396.93	141.28	378.58	846.78		

2017-2021 WCA AUTHORIZED IRRIGATION QUANTITY = 19,577.30 AF

TOTAL IRRIGATION USE FOR 2017-2021 = 18,730.52 AF

95.7%

AVERAGE IRRIGATION USE FOR 2017-2021 = 3,746.10 AF

REMAINDER IRRIGATION QUANTITY FOR 2017-2021 = 846.78 AF

4.3%

<sup>1</sup> GY8 VESTED WATER RIGHT IS AUTHORIZED FOR THREE POINTS OF DIVERSION. THE 200 AF ALLOTMENT CAN BE SPLIT BETWEEN THESE THREE POINTS IN ANY PROPORTION. FOR RECORD-KEEPING PURPOSES, THE VESTED WATER RIGHT WAS DIVIDED EVENLY BETWEEN THE THREE AUTHORIZED POINTS OF DIVERSION.

<sup>2</sup> BASE ALLOTMENTS ARE THE PRE-WCA AUTHORIZED QUANTITIES.

<sup>3</sup> WCA ANNUAL ALLOTMENTS ARE 130% OF THE BASE ALLOTMENT, WITH A MAXIMUM TOTAL ANNUAL ALLOTMENT OF 5,470.00 AF. CORRECTIVE CONTROL PROVISIONS 5a AND 5e.

<sup>4</sup> TOTAL WCA ALLOTMENTS ARE FIVE TIMES THE BASE ALLOTMENT. CORRECTIVE CONTROL PROVISIONS 5b AND 5c.

GREEN HIGHLIGHTED CELLS INDICATE USE ABOVE BASE ALLOTMENTS. ALL USE IS WITHIN THE PERMITTED 130% ADJUSTED ALLOTMENTS.

# KLA ENVIRONMENTAL SERVICES, INC.

PROJECT: **POWERLINE DAIRY, LLC**

LOCATION: **T26S R27W, GRAY COUNTY, KANSAS**

BY: CSG  
DATE: 1/11/2022

CHECKED BY: KMB  
DATE: 3/8/2022

## SUMMARY OF IRRIGATION WELLS USED FOR STOCKWATER PURPOSES FOR WCA PERIOD 2017 - 2021<sup>5</sup>

YEAR	ANNUAL WATER USE IN ACRE-FEET BY IRRIGATION FILE NO.		TOTAL ANNUAL USE (AF)	MAXIMUM ANNUAL WCA ALLOTMENT (AF)	REMAINING ANNUAL WCA ALLOTMENT (AF)
	24,842 (2) [FMNF #6] IRRIGATION	24,842 (2) [FMNF #6] STOCK			
2017	41.49	0.00	41.49	353.60	312.11
2018	143.63	200.33	343.96	353.60	9.64
2019	8.73	127.51	136.25	353.60	217.35
2020	0.00	47.34	47.34	353.60	306.26
2021	0.99	37.73	38.72	353.60	314.88
<b>TOTAL USE:</b>	<b>194.85</b>	<b>412.91</b>	<b>607.76</b>		
BASE ALLOTMENT <sup>6</sup> :	272.00				
WCA ANNUAL ALLOTMENT <sup>7</sup> :	353.60				
TOTAL WCA ALLOTMENT <sup>8</sup> :	1,360.00				
REMAINING ALLOTMENT:	752.24				

<sup>5</sup> WATER MAY BE USED FOR EITHER STOCKWATERING OR IRRIGATION AT ANY LOCATION INCLUDED IN THE WCA-AUTHORIZED PLACE OF USE. CORRECTIVE CONTROL PROVISIONS 3 AND 7.

<sup>7</sup> BASE ALLOTMENT IS THE PRE-WCA AUTHORIZED QUANTITY.

<sup>8</sup> WCA ANNUAL ALLOTMENT IS 130% OF THE BASE ALLOTMENT. CORRECTIVE CONTROL PROVISION 5a.

<sup>9</sup> TOTAL WCA ALLOTMENTS ARE FIVE TIMES THE BASE ALLOTMENT. CORRECTIVE CONTROL PROVISIONS 5b AND 5c.

GREEN HIGHLIGHTED CELLS INDICATE USE ABOVE BASE ALLOTMENT, BUT WITHIN THE 130% ADJUSTED ALLOTMENT.

# KLA ENVIRONMENTAL SERVICES, INC.

PROJECT: **POWERLINE DAIRY, LLC**

LOCATION: **T26S R27W, GRAY COUNTY, KANSAS**

BY: CSG  
DATE: 1/11/2022

CHECKED BY: KMB  
DATE: 3/8/2022

## SUMMARY OF WATER USE FOR WCA PERIOD 2017 - 2021

YEAR	STOCKWATER USE (AF)	IRRIGATION WATER USE (AF)	TOTAL ANNUAL USE (AF)
2017	692.80	3,552.13	4,244.93
2018	573.42	3,966.95	4,540.37
2019	539.86	3,934.53	4,474.39
2020	591.38	4,267.65	4,859.03
2021	605.05	3,009.26	3,614.31
<b>TOTAL USE FOR PERIOD OF 2017 - 2021 =</b>			<b>21,733.04</b>
<b>AVERAGE USE FOR PERIOD OF 2017 - 2021 =</b>			<b>4,346.60</b>

2017-2021 WCA AUTHORIZED QUANTITY (AF) = **22,794.00** (CORRECTIVE CONTROL PROVISION 2)

2017-2021 WCA USED QUANTITY (AF) = 21,733.04 95.3%

**2017-2021 WCA REMAINDER QUANTITY (AF) = 1,060.96 4.7%**

2012-2016 HISTORIC USE QUANTITY (AF) = **24,969.25**

2017-2021 WCA USED QUANTITY (AF) = 21,733.04

**WCA REDUCTION FROM HISTORIC USE (AF) = 3,236.21 13.0%**

# **POWERLINE DAIRY, LLC WATER CONSERVATION AREA MANAGEMENT PLAN**

## **APPENDIX 3**

Determination of Reasonable Stockwater Use  
Summary of Wastewater (Effluent) Applied to Place of Use  
for Irrigation Purposes

**KLA ENVIRONMENTAL SERVICES, INC.**

PROJECT: **POWERLINE DAIRY, LLC**

LOCATION: **SECTION 27 T26S R27W, GRAY COUNTY, KANSAS**

BY: **FCM**  
 DATE: 10/12/2017

CHECKED BY: **CSG**  
 DATE: 11/28/2017

**ESTIMATED MAXIMUM REASONABLE STOCKWATER USE QUANTITY  
 FOR CURRENT AND PLANNED DAIRY CAPACITY**

**USE BASED ON CURRENT CAPACITY:**

LIVESTOCK TYPE	USE	UNIT RATE (GAL/HD/DAY)	NO. OF HEAD	NO. OF DAYS	ANNUAL USE (GALLONS)
LACTATING COWS	DRINKING	35	12,000	365	153,300,000
LACTATING COWS	DAIRY PROCESSING	35	12,000	365	153,300,000
<b>TOTAL =</b>					<b>306,600,000</b>
					<b>= 940.9 AF</b>

**USE BASED ON PLANNED CAPACITY AFTER EXPANSION:**

LIVESTOCK TYPE	USE	UNIT RATE (GAL/HD/DAY)	NO. OF HEAD	NO. OF DAYS	ANNUAL USE (GALLONS)
LACTATING COWS	DRINKING	35	12,000	365	153,300,000
LACTATING COWS	DAIRY PROCESSING	35	12,000	365	153,300,000
DRY COWS	DRINKING	15	2,000	365	10,950,000
HEIFERS	DRINKING	12	10,000	365	43,800,000
<b>TOTAL =</b>					<b>361,350,000</b>
					<b>= 1,108.9 AF</b>

NOTES: DAIRY PROCESSING INCLUDES ALL SANITATION, COOLING AND RELATED PROCESSES ASSOCIATED WITH THE MILKING OPERATION.  
 GAL/HD/DAY = GALLONS/HEAD/DAY  
 1.0 AF = 1.0 ACRE-FOOT = 325,851 GALLONS

**KLA ENVIRONMENTAL SERVICES, INC.**

PROJECT: **POWERLINE DAIRY, LLC**

LOCATION: **GRAY COUNTY, KANSAS**

BY: CSG  
 DATE: 10/7/2021

CHECKED BY: KMB  
 DATE: 12/8/2021

**SUMMARY OF WASTEWATER (EFFLUENT) APPLIED TO POWERLINE DAIRY, LLC  
 PLACE OF USE FOR IRRIGATION PURPOSES**

Powerline Dairy, LLC generates wastewater from milk processing and sanitation operations. The facility is also required to contain all stormwater runoff generated within the facility. This wastewater is ultimately used for irrigation purposes. The wastewater supplements groundwater used for irrigated crop production and is applied on the same place of use as the groundwater authorized by the facility's water rights. Wastewater irrigation provides an additional source of recharge to the local aquifer utilized by Powerline Dairy, LLC.

Powerline Dairy, LLC is required to keep a record of all wastewater application according to the terms and conditions of their KDHE and EPA water pollution control permit. The wastewater application (i.e. irrigation) quantities summarized in the following table were obtained from the LAND APPLICATION SUMMARY of the facility's annual report to KDHE.

YEAR	WASTEWATER (EFFLUENT) APPLICATION	
	(GALLONS)	(ACRE-FEET)
2012	140,974,248	432.63
2013	143,329,561	439.86
2014	132,545,680	406.77
2015	142,217,358	436.45
2016	141,057,310	432.89
<b>AVERAGE</b>	<b>140,024,831</b>	<b>429.72</b>

YEAR	WASTEWATER (EFFLUENT) APPLICATION	
	(GALLONS)	(ACRE-FEET)
2017	171,565,567	526.52
2018	176,050,250	540.28
2019	148,790,915	456.62
2020	129,059,217	396.07
<b>AVERAGE</b>	<b>156,366,487</b>	<b>479.87</b>

Table KS6-1, Typical Efficiency for Irrigation Systems, in the NRCS National Engineering Handbook, Part 652, Irrigation Guide, indicates a system efficiency of 87% for center pivot sprinkler systems with nozzles near the ground. This is the type of irrigation system used by Powerline Dairy, LLC. This implies a potential recharge factor of 13% (100% - 87%).

Potential recharge factor from wastewater (effluent) irrigation = **13%**  
 2012-2016 Average Potential Recharge from Wastewater = 429.72 x 13% = 55.86 AF  
 2017-2020 Average Potential Recharge from Wastewater = 479.87 x 13% = 62.38 AF